

## WEST Search History

DATE: Monday, August 20, 2007

Hide?	Set Name	Query	Hit Count
	<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L11	L10 and L3	0
<input type="checkbox"/>	L10	pluripotent near2 embryoid	21
<input type="checkbox"/>	L9	pluripotentoid near2 embry	0
<input type="checkbox"/>	L8	L3 near2 embryoid body	0
	<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L7	L6 and L3	1
<input type="checkbox"/>	L6	L5 and L4	182
<input type="checkbox"/>	L5	pluripotent or Oct-3 or Oct-4 or Oct- 3/4	7511
<input type="checkbox"/>	L4	(floated coagulated mass) or neurosphere	496
<input type="checkbox"/>	L3	(iris pigment epithelial cell)	20
<input type="checkbox"/>	L2	(iris pigment epithelial cell) near2 eyeball	0
	<i>DB=USPT,PGPB; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L1	KOSAKA-MITSUKO!	2

END OF SEARCH HISTORY

Can 10/539 783.  
WEST.  
AD 8/20/07

Can # 10/559,783

AD

8/20/07

SN

10559783-82007-stn.txt  
FILE 'MEDLINE' ENTERED AT 01:38:00 ON 20 AUG 2007

FILE 'BIOSIS' ENTERED AT 01:38:00 ON 20 AUG 2007  
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=> s iria pigment epithelial cell  
L1 0 IRIA PIGMENT EPITHELIAL CELL

=> s iris pigment epithelial cell  
L2 277 IRIS PIGMENT EPITHELIAL CELL

=> s floated coagulated mass or neurosphere  
L3 3021 FLOATED COAGULATED MASS OR NEUROSPHERE

=> s l2 and l3  
L4 1 L2 AND L3

=> s l2 and pluripotent  
L5 0 L2 AND PLURIPOTENT

=> s l2 and stem cell  
L6 18 L2 AND STEM CELL

=> s l6 and embryoid  
L7 0 L6 AND EMBRYOID

=> dup rem l6  
PROCESSING COMPLETED FOR L6  
L8 8 DUP REM L6 (10 DUPLICATES REMOVED)

=> s l8 and py<2003  
2 FILES SEARCHED...  
L9 1 L8 AND PY<2003

=> s l4 and l9  
L10 0 L4 AND L9

=> disp l4 ibib abs 1-1

L4 ANSWER 1 OF 1 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on  
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ACCESSION NUMBER: 2007:449960 SCISEARCH

THE GENUINE ARTICLE: 151LC

TITLE: Multipotent cells from mammalian iris pigment epithelium  
AUTHOR: Asami, Maki; Sun, Guangwei; Yamaguchi, Masahiro; Kosaka,  
Mitsuko (Reprint)

CORPORATE SOURCE: RIKEN, Ctr Dev Biol, Res Unit Cell Plast, Chuo Ku, 2-2-3  
Minatojima Minamimachi, Kobe, Hyogo 6500047, Japan  
(Reprint); RIKEN, Ctr Dev Biol, Res Unit Cell Plast, Chuo  
Ku, Kobe, Hyogo 6500047, Japan; Univ Tokyo, Grad Sch Med,  
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ENTRY DATE: Entered STN: 10 May 2007  
Last Updated on STN: 10 May 2007

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB The regeneration of lens tissue from the iris of newts has become a classical model of developmental plasticity, although little is known about the corresponding plasticity of the mammalian iris. We here demonstrate and characterize multipotent cells within the iris pigment epithelium (IPE) of postnatal and adult rodents. Acutely-isolated IPE cells were morphologically homogeneous and highly pigmented, but some produced \*\*\*neurospheres\*\*\* which expressed markers characteristic of neural stem/progenitor cells. Stem/progenitor cell markers were also expressed in the IPE in vivo both neonatally and into adulthood. Inner and outer WE layers differentially expressed Nestin (Nes) in a manner suggesting that they respectively shared origins with neural retina (NR) and pigmented epithelial (RPE) layers. Transgenic marking enabled the enrichment of Nes-expressing IPE cells ex vivo, revealing a pronounced capacity to form \*\*\*neurospheres\*\*\* and differentiate into photoreceptor cells. IPE cells that did not express Nes were less able to form \*\*\*neurospheres\*\*\*, but a subset initiated the expression of pan-neural markers in primary adherent culture. These data collectively suggest that discrete populations of highly-pigmented cells with heterogeneous developmental potencies exist postnatally within the IPE, and that some of them are able to differentiate into multiple neuronal cell types. (c) 2006 Elsevier Inc. All rights reserved.

=> disp l4 ibib abs 1-1

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kosaka@cdb.riken.jp

COUNTRY OF AUTHOR: Japan

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=> disp 19 ibib abs 1-1

L9 ANSWER 1 OF 1 MEDLINE on STN  
 ACCESSION NUMBER: 1998406023 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 9733590  
 TITLE: The mRNA expression of cytokines and their receptors in cultured \*\*\*iris\*\*\* \*\*\*pigment\*\*\* \*\*\*epithelial\*\*\* \*\*\*cells\*\*\* : a comparison with retinal pigment epithelial cells.  
 AUTHOR: Kociok N; Heppekausen H; Schraermeyer U; Esser P; Thumann G; Grisanti S; Heimann K  
 CORPORATE SOURCE: Department of Vitreoretinal Surgery, University Eye Hospital, University of Cologne, Cologne, Germany.  
 SOURCE: Experimental eye research, \*\*\* (1998 Aug) \*\*\* Vol. 67, No. 2, pp. 237-50.  
 Journal code: 0370707. ISSN: 0014-4835.  
 PUB. COUNTRY: ENGLAND: United Kingdom  
 DOCUMENT TYPE: (COMPARATIVE STUDY)  
 Journal; Article; (JOURNAL ARTICLE)  
 (RESEARCH SUPPORT, NON-U.S. GOV'T)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199810  
 ENTRY DATE: Entered STN: 21 Oct 1998  
 Last Updated on STN: 21 Oct 1998  
 Entered Medline: 14 Oct 1998

AB It has been suggested that human iris pigment epithelial (IPE) cells isolated from iridectomized tissue could be used as autologous cells for transplantation into the subretinal space in diseases with dysfunctional retinal pigment epithelium (RPE). RPE cells synthesize a number of cytokines and their receptors which are important for its proper function. Nearly nothing is known about the capacity of IPE to synthesize cytokines or responding to them. To compare the mRNA expression of 36 cytokines or their receptors in cultured adult IPE cells and RPE cells we used semi-quantitative reverse transcription polymerase chain reactions (RT-PCR). Included in our assay were cytokines with known expression in RPE to get a broad basis for comparing IPE cells: basic fibroblast growth factor (bFGF or FGF-2), and one of its receptor (FGFR-1), epidermal growth factor (EGF), and its receptor EGF-R, transforming growth factor beta(TGFbeta), and its type III receptor TGFbeta-R3, the platelet-derived

growth factors and receptors (PDGF A, PDGF B, PDGF-Ralpha, PDGF-Rbeta), tumor necrosis factor alpha(TNFalpha), and two receptors TNF-R1 and TNF-R2, insulin (INS) with receptor INS-R, insulin-like growth factors (IGF1, IGF2), and receptors (IGF1-R, IGF2-R), vascular endothelial growth factor (VEGF), and two receptors (VEGF-R1 or FLT-1 and VEGF-R2 or FLK-1), the receptor for VEGF-C: VEGF-R3 or FLK-4, interleukin 6 (IL6), and its receptor (IL6-R), nerve growth factor (NGF), interleukin 1alpha(IL1alpha), and a receptor (IL1-R). In addition, cytokines or their receptors not known to be expressed in RPE were included to widen our picture of cytokine gene expression in the eye: \*\*\*\*stem\*\*\*\* \*\*\*\*cell\*\*\*\* factor (SCF), its receptor (SCF-R), low-affinity nerve growth factor receptor p75 (p75(NGF-R), ciliary neurotrophic factor (CNTF), and its receptor (CNTF-R), glycoprotein 130 interleukin 6 transducer (gp130 (IL6-SD), leukemia inhibitory factor (LIF), and its receptor (LIF-R). Semi-quantitative expression data were obtained using series of fivefold dilutions of each cDNA and a fixed number of PCR cycles. The expression of RPE 65, glyceraldehyde-3-phosphate dehydrogenase (GAPDH), and beta2-microglobulin (B2MG) was used as a control for cellular origin, RNA quality and PCR conditions. With the exception of insulin and tumor necrosis factor alpha all other cytokines analysed and their receptors were expressed in both IPE and RPE cells, even though the levels varied. No qualitative or quantitative difference were observed in the mRNA expression level of 34 (94%) of the cytokines or receptors between IPE and RPE. In contrast, the mRNA expression level of vascular endothelial growth factor (VEGF) and vascular endothelial growth factor receptor 2 [VEGF-RS (FLK-1)] was lower in IPE than in RPE cells. As an increased expression of VEGF in the RPE in maculae with age-related macular disease could be involved in its pathogenesis, a decreased expression of angiogenic growth factors in IPE cells could possibly be beneficial for the therapy of age-related maculopathy if indeed other tasks of non-functional RPE cells could be performed by IPE cells. The similarity of the mRNA expression pattern in 94% of the cytokines analyzed supports the assumption that IPE cells potentially can perform functions of RPE cells in the appropriate environment.

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